

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A computer-readable storage medium having computer-readable program instructions embedded therein for directing operation of a processor associated with a computer system, wherein the computer-readable program instructions, when executed by the processor on the computer system, include instructions that enable the processor to implement a data processing system, that wherein the data processing system comprises:

- a model service system configured to receive, as an input, an object model description, indicative of a first object model that represents business data, and generate a dimensional model based on the input;
- an entity generator generating a second object model based on the dimensional model, the second object model representing business data represented by the dimensional model; and
- a navigation service configured to identify a data navigation path from relationships between individual sets of data that comprise the business data, and output the data navigation path for navigation by a user from a first data set to a related second data set wherein the navigation service comprises:
 - a plurality of navigation providers each associated with a specific type of navigation;
 - a navigation service layer configured to transmit a navigation service request to one or more of the navigation providers that are registered with the navigation service layer; and
 - a metadata service for providing the plurality of navigation providers with access to a metadata store, each navigation provider being configured to respond to a received data navigation request by interacting with the metadata service to identify at least one data navigation path and to return the at least one identified data navigation path to the navigation service layer for output to the user.

2.(Currently Amended) The ~~system~~-computer-readable storage medium of claim 1 wherein the first object model represents transactional business data.

3.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 2 wherein the second object model represents aggregated business data.

4.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 3 wherein the navigation service identifies data navigation paths between the transactional and aggregated business data.

5. (Currently Amended) The computer-readable storage medium ~~system~~ of claim 1 ~~and wherein the~~ computer-readable program instructions enable the processor to implement the data processing system that further comprisingcomprises:

a data accessing system providing an interface to access the business data through the second object model.

6. (Currently Amended) The computer-readable storage medium ~~system~~ of claim 5 wherein the data accessing system is configured to receive an object oriented query expression expressed in terms of entities in the second object model, and wherein the data accessing system comprises:

a translation component configured to translate the object oriented query expression into a dimensional model query expression and execute it against the dimensional model.

7. Canceled.

8.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 1 wherein the object model description describes a relationship between entities in the first object model and wherein the model service system comprises:

a dimensional model construction system configured to receive, as inputs, the object model description and a focal point identifier identifying information in the object model as a focal point; and

a map system configured to receive, as an input, mapping information indicative of a mapping between entities in the first object model and a persistent data store.

9. Canceled.

10. (Currently Amended) The computer-readable storage medium system of claim 1 wherein at least one of the plurality of navigation providers is associated with navigation from aggregated data to related transaction data.

11. (Currently Amended) The computer-readable storage medium system of claim 1 wherein at least one of the plurality of navigation providers is associated with navigation from transaction data to related aggregated data.

12. (Currently Amended) The computer-readable storage medium system of claim 1 wherein at least one of the plurality of navigation providers is associated with navigation between two data units that share a dimension.

13. (Currently Amended) The computer-readable storage medium system of claim 1 wherein at least one of the plurality of navigation providers is associated with hierarchical navigation through collections of data that are hierarchically organized.

14. (Previously Presented) The computer-readable storage medium system of claim 1 wherein at least one of the plurality of navigation providers is associated with navigation between two data collections that the user has identified as related.

15. (Currently Amended) A ~~system~~ computer-readable storage medium having computer-readable program instructions embedded therein for directing operation of a processor associated with a computer system, wherein the computer-readable program instructions include instructions that, when executed by the processor, enable the processor to implement a data processing system, ~~wherein the data processing system~~ for supporting analytical processing of transactional business data by an application, the computer-readable program instructions enabling the processor to implement the data processing system comprising:

- a design system configured to receive a transactional object model description describing a transactional object model used in collecting the transactional business data and generate a dimensional model and an analytical programming object model from the transactional object model description, the analytical programming model representing data represented by the dimensional model and the transactional object model; and

- a navigation service configured to automatically identify navigable paths between data sets in the business data in the system and output the paths for navigation by a user wherein the navigation service is configured to identify navigation paths among data sets in the transactional object model, the dimensional model and the analytical programming object model.

16. Canceled.

17.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 15 wherein the navigation service identifies data navigation paths between the transactional and analytical business data.

18.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 15 wherein the navigation service further comprises:

a data accessing system providing an interface to access the business data through the analytical programming model.

19.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 18 wherein the data accessing system is configured to receive an object oriented query expression expressed in terms of entities in the analytical programming model, and wherein the data accessing system comprises:

a translation component configured to translate the object oriented query expression into a dimensional model query expression and execute it against the dimensional model.

20.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 15 wherein the transactional object model description describes a relationship between entities in the transactional object model and wherein the design system comprises:

a model service configured to receive, as inputs, the transactional object model description, a focal point identifier identifying information in the transactional object model as a focal point, and mapping information indicative of a mapping between entities in the transactional object model and a persistent data store.

21.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 20 wherein the navigation service comprises:

a plurality of navigation providers each associated with a specific type of navigation;
a navigation service layer configured to transmit a navigation service request to one or more of the navigation providers; and
a metadata service for providing the plurality of navigation providers with access to a metadata store, each navigation provider being configured to respond to a received data navigation request by interacting with the metadata service to identify at least one data navigation path.

22.(Currently Amended)) The computer-readable storage medium ~~system~~ of claim 21 wherein at least one of the plurality of navigation providers is associated with navigation from aggregated data to related transaction data.

23.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 21 wherein at least one of the plurality of navigation providers is associated with navigation from transaction data to related aggregated data.

24.(Currently Amended)The computer-readable storage medium ~~system~~ of claim 21 wherein at least one of the plurality of navigation providers is associated with navigation between two data units that share a dimension.

25.(Currently Amended) The computer-readable storage medium ~~system~~ of claim 21 wherein at least one of the plurality of navigation providers is associated with hierarchical navigation through collections of data that are hierarchically organized.

26. (Currently Amended) The computer-readable storage medium ~~system~~ of claim 21 wherein at least one of the plurality of navigation providers is associated with navigation between two data collections that the user has identified as related.